(Silhet, Assam) to Myanmar and northern Vietnam. Recently, it has also been reported from southeastern Yunnan in China (Zhang and Chen 1996) and from northern Thailand (Larsen 1999). Therefore, considering the actual area of distribution, *B. wallichii* should not be referred to as an endemic species.

As regards *B. ovatifolia*, Nayar (1996: 180) gave the distribution as "Arunachal Pradesh and adjacent Tibetan hills." Sanjappa (1992: 4) and Chowdhery *et al.* (1996: 392) have also reported this species from Arunachal Pradesh. In the course of my study on the Bauhinias, I have, however, found that only one collection (*J. Joseph* 48504 – CAL) from the forest around Tihun in Lohit district, Arunachal Pradesh comes very close to *B. ovatifolia*, but its identity has yet to be confirmed (see Bandyopadhyay *et al.* 1993). I do not know the source from which the distribution of *B. ovatifolia* in Arunachal Pradesh has been taken by the aforesaid authors, but if it is based on *J. Joseph* 48504 (CAL) then it would be appropriate to treat *B. ovatifolia* as endemic only to the type locality (Tianyang, Guangxi) till its occurrence in Arunachal Pradesh is confirmed.

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37. PITS WITH INFLATED TRICHOMES ON UNDER SURFACE OF LEAVES OF *BAUHINIA MALABARICA* ROXB., LEGUMINOSAE: CAESALPINIOIDEAE

(*With one plate*)

Bauhinia subgen. *Piliostigma* sect. *Piliostigma* is represented in India by two species, namely *Bauhinia foveolata* Dalz. and *B. malabarica* Roxb.

Dalzell (in *J. Linn. Soc.* 13: 188. 1872) while describing *B. foveolata* mentioned, "The structure of the under surface of the leaf is very curious. There are numerous pits within the small areolae of the reticulations; and each is tenanted by one minute seed-like body attached to the cavity by a fine thread."

The aforesaid seed-like body is actually an inflated trichome that was also known by various other terms in the past (see Tucker *et al.* in *Bot. J. Linn. Soc.* 88: 291-301. 1984).

In the course of my study, I have observed that a few to many fine pits (some of them not so prominent as in *B. foveolata*) with an inflated trichome in each of them are present within the areolae of the reticulations on the under surface

Bandyopadhyay, S.: *Bauhinia foveolata* Dalz. PLATE 1

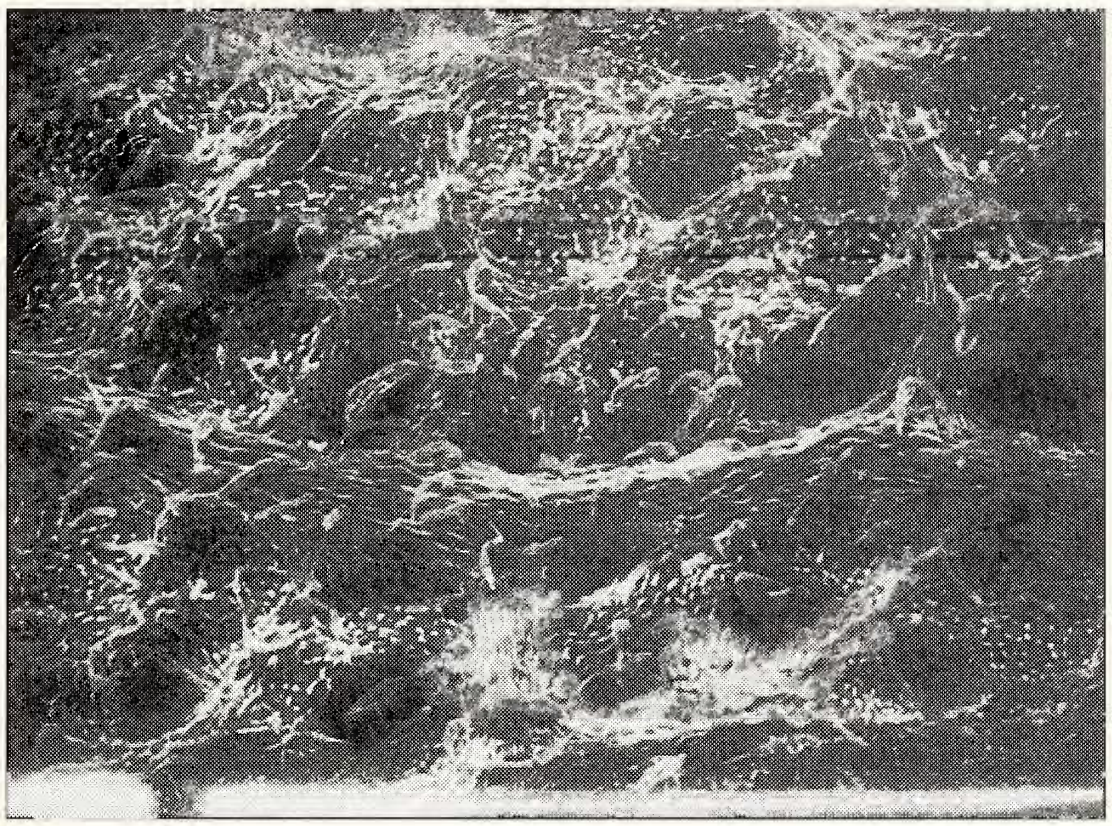

Fig. 1: *Bauhinia foveolata* Dalz; Scanning electron micrograph of pits with inflated trichomes on the under surface of a leaf. Source: K.V. Billore 116174 (CAL). Marker segments = 10 µm.

of the leaves of *B. malabarica* too, which have not been reported earlier. They were present in most but not all the specimens studied in CAL. Further, the pits are not so closely situated as in *B. foveolata* leaves except sometimes near the leaf margins. The inflated trichomes in the fresh leaves are at first hyaline, later yellowish to rusty. Finally they shrink and wither away after maturity of the leaves.

Many pits with inflated trichomes were also present on the under surface of the seed leaf of *B. malabarica*, observed on seedlings that grew under the trees of *B. malabarica* cultivated in Division 21 of the Indian Botanic Garden, Howrah. Das (1996) also studied the seedlings of the same tree by germinating some seeds received from me (Das, pers. comm.). However, he did not mention pits with inflated trichomes on the under surface of the leaves.

The voucher specimen (15.v.2000, *Bandyopadhyay* 105) of the seedlings of *B. malabarica* has been deposited in CAL.

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38. SEEDLING MORPHOLOGY OF *BAUHINIA FOVEOLATA* DALZ., LEGUMINOSAE: CAESALPINIOIDEAE

(*With one text-figure*)

Bauhinia L. subgen. *Piliostigma* (Hochst.) Kurz sect. *Piliostigma* is represented in India by two species, namely *Bauhinia foveolata* Dalz. and *B. malabarica* Roxb. Studies on the seedling morphology of the latter species were carried out by Troup (1921), Das (1996), and Das and Paria (1999). The latter, however, overlooked the publication of Troup (1921) where the seedling morphology of three more species, namely *B. racemosa* Lam., *B. purpurea* L. and *B. variegata* L. were described in detail. I describe here the seedling morphology of *B. foveolata*, which is endemic to India and found in semi-evergreen forests from 450-1,000 m in Gujarat, Dadra & Nagar Haveli, Maharashtra and Karnataka.

Eleven seed samples were scarified with a razor and sown in the soil at a depth of about 5 mm in September 1999. Six of the seeds germinated and the seedlings started protruding above the soil surface after three days. The average maximum and minimum temperature during that period were 32.5 °C and 26.5 °C respectively. The seedlings took another 65-73 days to reach the 4th leaf stage. One of the seedlings in the early 4th leaf stage has been deposited as a voucher specimen (13.xi.1999, *Bandyopadhyay s.n.*) in CAL.

Measurements of different parts of the seedlings, given here up to the 4th leaf stage, are those for the fully mature parts.

Duke and Polhill (1981) have been followed for terms like phaneroepigeal and foliar cotyledon.

Seedlings phaneroepigeal, 14-16.5 cm high at 4th leaf stage. Primary root 9-10 cm long, whitish-brown, terete, tapering; secondaries moderate in number, very fine, fibrous. Hypocotyl 1.2-1.7 cm long, whitish-green, arched at first,